Massachusetts Department of Environmental Protection
Source Water Assessment and Protection (SWAP) Report
For
ADESA Impact

What is SWAP?

The Source Water Assessment and Protection (SWAP) program, established under the federal Safe Drinking Water Act, requires every state to:

- Inventory land uses within the recharge areas of all public water supply sources;
- Assess the susceptibility of drinking water sources to contamination from these land uses; and
- Publicize the results to provide support for improved protection.

SWAP and Water Quality

Susceptibility of a drinking water source does *not* imply poor water quality. Actual water quality is best reflected by the results of regular water tests.

Water suppliers protect drinking water by monitoring for more than 100 chemicals, treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap.

Prepared by the Massachusetts Department of Environmental Protection, Bureau of Resource Protection, Drinking Water Program

Date Prepared:
April, 2006

Table 1: Public Water System (PWS) Information

PWS NAME	ADESA Impact
PWS Address	580 Myricks Street
City/Town	Taunton, Massachusetts
PWS ID Number	4293009
Local Contact	James Chambers
Phone Number	(508) 823-7440

Well Name	***Source ID#***	***Zone I (in feet)***	***IWPA (in feet)***	***Source Susceptibility***
Well #1	4293009-01G	100	422	High

Introduction

We are all concerned about the quality of the water we drink. Drinking water wells may be threatened by many potential sources of contamination, including septic systems, road salting, and improper disposal of hazardous materials. Citizens and local officials can work together to better protect these drinking water sources.

Purpose of this report:
This report is a planning tool to support local and state efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential sources of contamination the assessment helps focus protection efforts on appropriate best management practices (BMPs) and drinking water source protection measures. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

This report includes:
1. Description of the Water System
2. Discussion of Land Uses within Protection Areas
3. Recommendations for Protection
4. Attachments, including a Map of the Protection Areas

1. Description of the Water System

The drinking water supply well for ADESA Impact, an auto storage yard, is located in the City of Taunton. Water is drawn from one groundwater well with Zone I radius of 100 feet and an Interim Wellhead Protection Area (IWPA) radius of 422 feet. The well is located in an aquifer with a high vulnerability to contamination due to the absence of hydrogeologic barriers (i.e. clay) that can prevent contaminant migration. Please refer to the attached map to view the boundaries of the Zone I and IWPA.

Water from the well is treated for hardness before entering the distribution system. For current information on monitoring results, please contact the Public Water System contact person listed above in Table 1 for a copy of the most recent Consumer Confidence Report. Drinking water monitoring reporting data is also available on the web at http://www.epa.gov/safewater/ccr1.html.

What is a Protection Area?

A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and an Interim Wellhead Protection Area (IWPA).

- **The Zone I** is the area that should be owned or controlled by **the** water supplier and limited to water supply activities.
- **The IWPA** is the larger area that is likely to contribute water to the well.

In many instances the IWPA does not include the entire land area that could contribute water to the well. Therefore, the well may be susceptible to contamination from activities outside of the IWPA that are not identified in this report.

What is Susceptibility?

Susceptibility is a measure of a well's potential to become contaminated due to land uses and activities within the Zone I and Interim Wellhead Protection Area (IWPA).

2. Discussion of Land Uses in the Protection Areas

The land uses in the IWPA is mostly a mixture of forest, waste disposal (licensed salvage yard) and residential (refer to attached map for details). Land uses and activities that are potential sources of contamination are listed in Table 2.

Key Land Uses and Protection Issues include:

1. Zone I
2. Residential Land Uses
3. Presence of Oil or Hazardous Material Contamination Site

The overall ranking of susceptibility to contamination for the system is high, based on the presence of at least one moderate threat land use within the water supply protection areas, as seen in Table 2.

1. Zone I – The Zone I for the well is a circular area with 100-foot radius that is centered at the wellhead. Massachusetts drinking water regulations (310 CMR 22.00) require public water suppliers to own the Zone I, or control the Zone I through a conservation restriction. Only water supply activities are allowed in the Zone I. The Zone I is owned by the public water system. Non-water-supply uses within the Zone I for the well include a portion of the parking lot and the access road.

Zone I Recommendations:

- ✓ Relocate parking area away from the Zone I.
- ✓ Reroute access road outside Zone I.
- ✓ Keep any new non water supply activities out of the Zone I.

2. Residential Land Uses – A portion of the IWPA area consists of residential land use. None of the areas have public sewers, therefore, all use on-site septic systems. If managed improperly, activities associated with residential areas can contribute to drinking water contamination. Common potential sources of contamination include:

- **Septic Systems** – Improper disposal of household hazardous chemicals to septic systems is a potential source of contamination to the groundwater because septic systems lead to the ground. If septic systems fail or are not properly maintained they can be a potential source of microbial contamination.
- **Household Hazardous Materials** - Hazardous materials may include automotive wastes, paints, solvents, pesticides, fertilizers, and other substances. Improper use, storage, and disposal of chemical products used in homes are potential sources of contamination.

Table 2: Table of Activities within the Water Supply Protection Areas

Potential Contaminant Sources	Zone I	IWPA	Threat	Comments
Residential – Septic Systems	No	Yes	Moderate	Educate residents on proper septic system operation and maintenance.
Residential – Lawn Care	No	Yes	Moderate	Educate residents on proper lawn care techniques.
Salvage Yard	No	Yes	High	Ensure that BMPs are in place for the handling and disposal of automotive chemicals, wastes, and batteries.
parking lot	Yes	Yes	Moderate	Stormwater runoff, spills
portion of road	No	Yes	Moderate	Stormwater runoff, spills
on-site septic system	No	Yes	Moderate	bacteria, improper disposal of hazardous materials
21 E site	No	Yes	---	Tier Classified Oil or Hazardous Materials Sites are not ranked due to their site-specific character. Individual sites are identified in Appendix A.

*** -For more information on Contaminants of Concern associated with individual facility types and land uses please see the SWAP Draft Land Use / Associated Contaminants Matrix on DEP's website - www.state.ma.us/dep/brp/dws/.**

Glossary

Zone I: The area closest to a well; a 100 to 400 foot radius proportional to the well's pumping rate. To determine your Zone I radius, refer to the attached map.

IWPA: A 400 foot to ½ mile radius around a public water supply well proportional to its pumping rate; the area DEP recommends for protection in the absence of a defined Zone II. To determine IWPA radius, refer to the attached map.

Zone II: The primary recharge area defined by a hydrogeologic study.

Aquifer: An underground water-bearing layer of permeable material that will yield water in a usable quantity to a well.

Hydrogeologic Barrier: An underground layer of impermeable material that resists penetration by water.

Recharge Area: The surface area that contributes water to a well.

- **Heating Oil Storage** - If managed improperly, Underground and Aboveground Storage Tanks (UST and AST) can be potential sources of contamination due to leaks or spills of the fuel oil they store.
- **Stormwater** – Catch basins transport stormwater from roadways and adjacent properties to the ground. As flowing stormwater travels, it picks up debris and contaminants from streets and lawns. Common potential contaminants include lawn chemicals, pet waste, and contaminants from automotive leaks, maintenance, washing, or accidents.

Residential Land Use Recommendations:

✓ Educate residents on best management practices (BMPs) for protecting water supplies. Distribute the fact sheet "Residents Protect Drinking Water" available in the attachments and on www.mass.gov/dep/brp/dws/protect.htm, which provides BMPs for common residential issues.

✓ Work with planners to control new residential developments in the water supply protection areas.

✓ Promote BMPs for stormwater management and pollution controls. Visit DEP's web site for additional information and assistance at mass.gov/dep/brp/wm/nonpoint.htm.

3. Presence of Oil or Hazardous Material Contamination Sites – Based upon a DEP web site database query (http://www.state.ma.us/dep/bwsc/sitelist.htm), the IWPA area contains a DEP Tier 1C Classified Oil and/or Hazardous Material Release Site indicated on the map as Release Tracking Number (RTN) 4-0018119. The site is listed as an hazardous material site and is located on property.

Oil or Hazardous Material Contamination Sites Recommendation:

✓ Monitor progress on any ongoing remedial action conducted for the known hazardous material release site.

Refer to Table 2 for a complete list of land uses. Identifying potential sources of contamination is an important initial step in protecting your drinking water sources. Further local investigation will provide more in-depth information and may identify new land uses and activities that are potential sources of contamination. Once potential sources of contamination are identified, specific recommendations like those below should be used to better protect your water supply.

3. Protection Recommendations

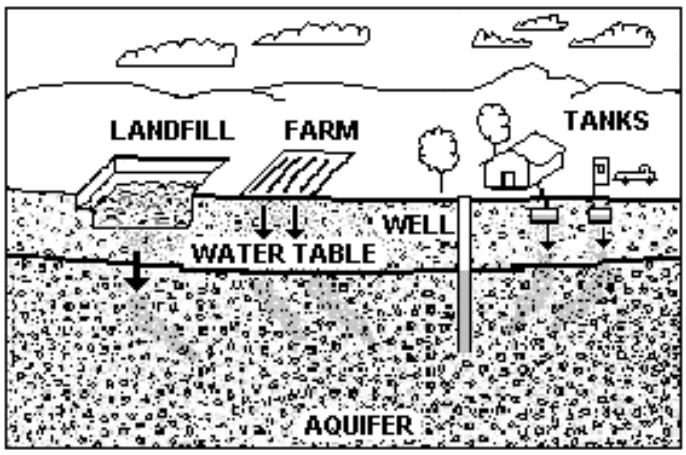

Figure 1: Example of how a well could become contaminated by different land uses and activities.

Implementing protection measures and best management practices (BMPs) will reduce the wells' susceptibility to contamination. Mr. James Chambers, ADESA Impact representative, has indicated that the facility will be connecting to town water in the near future. ADESA Impact is commended for eliminating potential contamination source by taking this approach.

In the meantime, ADESA Impact should review and adopt the following key recommendations:

Zone I:

✓ Keep non-water supply activities out of the Zone I.

✓ Redirect road and parking lot drainage in the Zone I away from well.

Facilities Management:

✓ Septic system components should be located, inspected, and maintained on a regular basis.

For More Information:

Contact Isabel Collins in DEP's Lakeville Office at (508) 946-2726 for more information and for assistance in improving current protection measures.

More information relating to drinking water and source protection is available on the Drinking Water Program web site at: www.state.ma.us/dep/brp/dws/

Additional Documents:

To help with source protection efforts, more information is available by request or online at www.state.ma.us/dep/brp/dws, including:

1. Water Supply Protection Guidance Materials such as model regulations, Best Management Practice information, and general water supply protection information.
2. MA DEP SWAP Strategy
3. Land Use Pollution Potential Matrix
4. Draft Land/Associated Contaminants Matrix

Copies of this assessment have been made available to the public water supplier and town boards.

Planning:

- ✓ Work with local officials in Taunton to include the IWPA in Aquifer Protection District Bylaws and to assist you in improving protection.
- ✓ Supplement the SWAP assessment with additional local information and incorporate it into water supply educational efforts. Use a land use inventory to assist in setting priorities, focusing inspections, and creating educational activities.

These recommendations are only part of your ongoing local drinking water source protection. Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures.

4. Attachments

- Map of the Public Water Supply (PWS) Protection Area.
- Recommended Source Protection Measures Factsheet
- Your Septic System Brochure
- Wellhead Protection Tips
- Protecting Groundwater from Pesticides

APPENDIX A – Table of Tier Classified Oil and/or Hazardous Material Sites within the Water Supply Protection Areas

DEP's datalayer depicting oil and/or hazardous material (OHM) sites is a statewide point data set that contains the approximate location of known sources of contamination that have been both reported and classified under Chapter 21E of the Massachusetts General Laws. Location types presented in the layer include the approximate center of the site, the center of the building on the property where the release occurred, the source of contamination, or the location of an on-site monitoring well. Although this assessment identifies OHM sites near the source of your drinking water, the risks to the source posed by each site may be different. The kind of contaminant and the local geology may have an effect on whether the site poses an actual or potential threat to the source.

The DEP's Chapter 21E program relies on licensed site professionals (LSPs) to oversee cleanups at most sites, while the DEP's Bureau of Waste Site Cleanup (BWSC) program retains oversight at the most serious sites. This privatized program obliges potentially responsible parties and LSPs to comply with DEP regulations (the Massachusetts Contingency Plan – MCP), which require that sites within drinking water source protection areas be cleaned up to drinking water standards.

For more information about the state's OHM site cleanup process to which these sites are subject and how this complements the drinking water protection program, please visit the BWSC web page at http://www.state.ma.us/dep/bwsc. You may obtain site -specific information two ways: by using the BWSC Searchable Sites database at http://:www.state.ma.us/dep/bwsc/sitellst.htm, or you may visit the DEP regional office and review the site file. These files contain more detailed information, including cleanup status, site history, contamination levels, maps, correspondence and investigation reports, however you must call the regional office in order to schedule an appointment to view the file.

The table below contains the list of Tier Classified oil and/or Hazardous Material Release Sites that are located within your drinking water source protection area.

Table 1: Bureau of Waste Site Cleanup Tier Classified Oil and/or Hazardous Material Release Sites (Chapter 21E Sites) - Listed by Release Tracking Number (RTN)

RTN	Release Site Address	Town	Contaminant Type
4-0018119	580 Myricks St.	Taunton	Hazardous Material

For more location information, please see the attached map. The map lists the release sites by RTN.